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Thorn, Jessica Paula Rose (2020) *AAS Priority Areas of Support on Climate Change and Development in Africa: Outcome Document of the AAS Climate Change Experts Consultative Meeting*. Research Report. African Academy of Science

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Outcome Document of the AAS Climate Change Experts Consultative Meeting

July 2019

AAS priority areas of support on Climate Change and Development in Africa

1. Context

The Fifth assessment report (AR5) of 2015 and the 2018 Special report on the implications of the 1.5°C global warming produced by the International Panel on Climate Change (IPCC) indicated that keeping global temperature rise below 1.5°C would require 'deep emissions reductions and rapid, far-reaching and unprecedented changes in all aspects of society'. The IPCC Special Report on Global Warming of 1.5°C (SR 1.5)¹ finds that as of 2017, global warming reached 1°C and climate change is already affecting people, ecosystems and livelihoods around the world with disproportionately greater impacts on developing countries. Africa, which contributes only 3.6% of the total global emissions, is disproportionately affected by the impacts of climate change than any other continent because of its extreme dependency on natural resources and cycles and its weak adaptive capacity. At current rates of emissions, global warming would reach 1.5°C between 2030 and 2050. These stark warnings from the IPCC are a call to swift and concerted action to ensure the resilience of the African continent to climate change, taking into account how this intersects with other drivers of global environmental change. The report clearly indicated the requirement at global level of four rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems.

The African Union (AU) recognises that addressing climate change and its impacts are fundamental to achieving Agenda 2063, which is the continent's over-arching strategic development framework. Adapting and mitigating to climate

change and ensuring a low-carbon resilient future are some of the critical ingredients for the continent's development and its ability to meet the Sustainable Development Goals (SDGs). The key actions identified under Agenda 2063 include the identification and establishment of regional technology centres, support to programmes on climate change and establishing climate resilient agricultural development programmes.

Climate change and the environment are key focus areas of the AAS 2018-2022 strategic plan. The consultative scientific process of the IPCC provides various opportunities for African scientists to contribute to the global process. Unfortunately, the contribution and involvement of African scientists both in terms of contributing peer-reviewed publications or commenting on draft IPCC reports has been very limited. In July 2019, the African Academy of Sciences (AAS) in coordination with IPCC Secretariat and the United Nations Institute for Natural Resource in Africa (UN-INRA) convened African scientists and key policy stakeholders to deliberate on these challenges and identify evidence-based actions to address the issues raised by IPCC SR1.5. The meeting identified priority areas for the AAS to explore opportunities for enhancing AAS strategic contribution to the regional climate change and development forums in line with major policy frameworks including the AU Agenda 2063, the AAS vision of transformed lives through science and other relevant regional and global frameworks. This document presents the outcome of the AAS-IPCC Consultative meeting which have been further reviewed and refined with inputs from the Climate and Environment Working Group of AAS.



Adapting and mitigating to climate change and ensuring a low-carbon resilient future are some of the critical ingredients for the continent's development and its ability to meet the Sustainable Development Goals (SDGs).

2. Strategic support areas of AAS on Climate Change and Development in Africa

The following three areas are identified as the possible support areas of AAS on climate change and development in Africa within the context of the strategic plan of AAS 2018-2022.

2.1 African Climate Research Capacity Needs

The capacity gap associated with climate research, both in terms of human capacity and institutional facility, has been well recognized by African countries and its development partners. The AAS and partners have begun to address the need for evidence-based research on climate change through a number of programmes including the Climate Impacts Research Capacity and Leadership Enhancement (CIRCLE) and Climate Research for Development (CR4D) fellowship schemes. The CIRCLE fellowship supported thematic research in the climate sensitive sectors of energy, water resources, agriculture, forest, health and the political economy of climate change resilience. The CR4D fellowships are addressing priorities defined by Africa's scientists through the African Climate Policy Centre (ACPC) and include research in foundational climate sciences, climate impacts, information base, translation and communication; and

engagement with policy, development and other decision-making communities for uptake of impact information.

The AAS recognizes the need to work closely with National Meteorological Departments and enhance collaboration with national systems to generate data. There is a need to improve the accuracy, quality, accessibility, time availability, usability, computing infrastructure. Other ways research capacity can be built on the continent is to centralize database repositories, incubation and innovation centres, scale up graduate training programmes and funding, develop climate change curricula and module development across different sectors, develop quality assessments with national bodies, mentor young scholars, increase bilateral grants; enhance connections between negotiators and scientists; and promote collaboration between postdoctoral researchers.

2.2 Climate Change and the African Union Agenda 2063

The achievement of African Union's vision for a prosperous continent based on inclusive growth and sustainable development depends on a multi-sectoral approach to addressing the interconnections of climate with agriculture, energy, health, environment infrastructure, human settlement, water, health, poverty, industry, security, among others. The IPCC identified transitions in energy, land and agriculture, urban and infrastructure, and energy systems as critical transition required at the global level. Africa's development should be informed by evidence that is co-produced by different stakeholders including knowledge generators and the users of such knowledge. Understanding, developing and implementing climate actions in the context of Africa's strategic visions enables institutions and different stakeholders to collaborate, innovate and bring in new ways of thinking to the nexus of climate and development. Such a nexus approach in critical area of research and development for selected priority issues that may include the following are of vital importance for the region.

- **Climate change and natural resource:** with a focus on conserving and maintaining the ecological foundation of African societies by analysing and identifying the adaptation and mitigation measures to reduce the impact of climate change on natural resources (land, water, biodiversity, etc.) and build the resilience of local communities.
- **Climate change and infrastructure:** with a focus on how to develop more sustainable and transformational

infrastructure, including energy, urban, industrial and governance infrastructure, that could continuously fulfil the wellbeing of the African people;²

- **Climate change and health:** with a focus on analysing the link between climate change and environmental pollution, habitat destruction and air quality and the associated health impacts related to infectious and life-style associated diseases both within urban and rural settings.^{3 4 5 6}

To address these strategic issues, climate researchers (especially in Africa) must work across regions with regional climate centres, governments and civil societies and like-minded partners to ensure human capital and infrastructural assets are developed and maintained, and knowledge is integrated from different sciences. In particular, more concerted efforts is needed to increase the engagement of some disciplines, such as cognitive, behavioural, communication, economic, decision and engineering sciences. The transition to a more effective interdisciplinary and transdisciplinary approaches and practices will require substantial changes in cultures within and actions across a range of institutions, including the private sector, government, non-governmental organizations, professional societies, research institutes and universities. Importantly, they must be committed to develop clear evidence to guide policy makers towards effective policy action and ensure research priorities are set that respond to particular place-based contexts, but also respond across temporal and spatial scales.



An illustration of the climate change effects

2.3 The Climate Science and Policy Interface

A key gap in climate governance in Africa is the weak linkage between science and policy and strengthening the interface between them is crucial to ensure that national, regional and continental development strategies, policies and programmes are climate informed. As an IPCC observer, the AAS will facilitate the alignment of research support with global and continental policies, guide the growth and implementation of an African strategy for climate change and advise African researchers on knowledge gaps in areas of greater need for the continent. The Academy will also address the urgent need for African data to support informed decision making on economic matters. To this effect, the AAS will ensure the development of the AAS think-tank on environment and climate change as legitimate expertise to advise governments on topical matters of climate change

that impact health, agriculture, natural resource and other developmental sectors in African countries. As such, the AAS recognizes the importance of ecological systems as part of the infrastructural fabric that supports and sustains society and builds resilience.^{7 8 9}

The guiding principles for this priority include (i) ensuring African leadership and ownership in setting the climate-development agenda for the continent; (ii) placing consideration of climate issues high on the political agenda as a key strategic element for structural transformation; (iii) employing transformative programmatic approaches to better inform policies as well as supporting practices on the ground; and (iv) aligning national and regional development agendas for a transformation rooted in local and national realities.

3. Recommendations

The following specific actions are proposed to be undertaken by AAS in order to facilitate the development and implementation of the actions under the above three strategic areas.

- i. Facilitate and support the development of a more detailed strategic action document on the priority areas through its working groups on climate change and environment
- ii. Enhance the participation and contribution of AAS members to the African Group of Negotiators (AGN) on Climate Change and the Committee of Heads of State on Climate Change (CAHOSCC) to strengthen the interface between climate science and policy.
- iii. Facilitate and increase representation and participation of African climate change scientists and ensuring their contributions to international climate processes such as the IPCC, International Panel on Biodiversity and Ecosystem Services (IPBES), United Nations Framework Convention on Climate Change (UNFCCC), The United Nations High Level Political Forum (HLPF) on SDGs, the Least Developed Countries Forum and other related platforms.
- iv. Advocate for more concrete political commitment and financial support from African governments for building human and institutional capacity for research on climate change and development.
- v. Prioritise best practices for developing capacity for climate change in Africa, focusing on excellence in science, early career researchers, curbing gendered attrition in climate science, institutional strengthening, mentoring and translational work.
- vi. Facilitate a coordinated approach and collaboration in the delivery of climate change priority activities and mobilise African climate expertise to support African governments in co-producing evidence-based climate policies relevant to local and national development and spatial plans
- vii. Promote a nexus approach to climate research that facilitates interdisciplinary and transdisciplinary research and enable inclusion of diverse actors.
- viii. Support adaptive decision making and risk management, incorporating uncertainty, complexity, and flexibility in updating research priorities and prioritizing place-based analyses that are accessible to decision makers to help them institutionalize robust adaptation planning.



4. References

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About the Africa STI Priority Setting Series

This outcome document is part of the outputs of the science prioritisation exercises being conducted by the African Academy of Sciences under the Empowering Africa Empowering African Ownership Research and Innovation programme (2019-2023). The programme is a collaborative initiative of the AAS and AUDA/NEPAD aimed at engaging key stakeholders in the process of identifying and validating scientific priorities for the African continent.

Guided by the SDGs, Africa's Agenda 2063 and STISA 2024, scientific priorities for the continent will be identified and disseminated with the aim to inform investment decisions of major actors including African governments, funders, science leaders and other stakeholders to ensure that resources are directed at the critical gaps identified for the continent. This programme is funded by the Bill and Melinda Gates Foundation.

***Citation:** *African Academy of Sciences (2020), 'AAS Priority Areas of Support on Climate Change and Development in Africa: Outcome Document of the AAS Climate Change Experts Consultative Meeting, July 2019, Accra Ghana. Nairobi: AAS.*

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